

REMARKS/ARGUMENTS

Favorable reconsideration of this application, as presently amended and in light of the following discussion, is respectfully requested.

Claims 1, 4, 6-7, 11 and 13 are pending in the application. Claims 1 and 4 are amended by the present amendment. Support for amended Claims 1 and 4 can be found in the original specification, claims and drawings. No new matter is presented.

In the Office Action, Claims 1, 4, 6-7, 11 and 13 are rejected under 35 U.S.C. § 103(a) as unpatentable over Trossen et al. (U.S. Pat. 7,054,643, herein Trossen) in view of Petrus et al. (U.S. Pub. 2004/0063406, herein Petrus).

In response to the rejection noted above, Applicants respectfully submit that amended independent Claims 1 and 4 recite novel features clearly not taught or rendered obvious by the applied references.

Amended independent Claim 1, for example, recites a radio communication system for performing multicast communication, comprising:

a reception ability value collector configured to collect a reception ability value ***from each mobile station*** belonging to a specific multicast group, wherein ***the reception ability value defines a reception buffer size of each mobile station***;

a transmission method determiner configured to determine ... the transmission method ... so that a mobile station equipped with ***a lowest reception ability*** can receive the information using the determined transmission method.

Independent Claim 4, while directed to an alternative embodiment, is amended to recite similar features. Accordingly, the remarks and arguments presented below are applicable to each of independent Claims 1 and 4.

Turning to the applied references, Trossen describes a node for transmitting multicast data over a wireless channel and determining a data rate for such a transmission. Trossen describes that the node 207 receives a measured signal-to-noise ratio (SNR), or similar

quality measure, reported using signaling messages from a wireless terminal 101.¹ The node 207 manages available frequency spectrum (i.e. resources) for multicast services, and groups wireless terminals having approximately equal SNR measurements, in accordance with the received SNR measurements.² Then, the node 207 determines a corresponding maximum data rate for each group, which is formed by a plurality of wireless terminals having approximately equal SNR measurements.³

As conceded at p. 4 of the Office Action, however, Trossen fails to teach that “the reception ability value defines at least one of a demodulation method, a reception buffer size, a number of bits or codes which a processor can process per one operation, an error correction method and an interleaving length.”

In an attempt to remedy this deficiency, the Office Action relies on Petrus asserting that that this reference “teaches a reception ability value that defines a demodulation method,” and that it would have been obvious to one of ordinary skill in the art at the time of the invention to combined the cited references to arrive at Applicants’ claims.

Petrus describes a method and apparatus for link adaptation that selects a transmission mode based on a quality of a transmitted signal and available power for transmission.⁴ More particularly, Petrus describes that a base station receives the quality of a signal received at the remote terminal, and receives information regarding the available power at the remote terminal.⁵ The base station also determines the transmission mode (i.e. transmission method) such as a modulation class or mod class in accordance with the received signal quality and available transmission power.⁶

¹ Trossen, col. 5, ll. 11-15 and col. 12, ll. 43-46.

² Id., col. 6, ll. 16-20.

³ Id., col. 5, ll. 23-26, col. 6, ll. 21-24, Fig. 9 step 905, and col. 12, ll. 51-55.

⁴ Petrus, Abstract.

⁵ Id., Abstract and paragraph [0015].

⁶ Id., paragraphs [0031-0032].

However, even if Trossen and Petrus were to be combined as asserted in the Office Action, the combination fails to teach or suggest a radio communication system for performing multicast that includes “a reception ability value collector configured to collect a reception ability value *from each mobile station* belonging to a specific multicast group, wherein *the reception ability value defines a reception buffer size of each mobile station ...* and a transmission method determiner configured to determine ... the transmission method ... so that a mobile station equipped with *a lowest reception ability* can receive the information using the determined transmission method,” as recited in independent Claim 1.

In rejecting the claimed features directed to the “reception ability value collector,” the Office Action relies, in part, on col. 4, ll. 6-11, col. 5, ll. 20-43 and col. 6, ll. 4-24 of Trossen. These cited portions of Trossen describe that wireless terminals 101, 151, 161 and 162 report measurements that are indicative of the wireless characteristics of a link between the wireless terminals and the base station by signaling the base station 105. The node 207 corresponding to the base station then converts an SNR measurement based on the measurements to a corresponding data rate that a wireless terminal can support over the wireless channel 102.

Trossen, therefore, describes that the base station calculates a maximum data rate for a given wireless terminal based on a quality of the communication link between the base station and the wireless terminal as measured at the wireless terminal. Thus, the base station in Trossen collects a measurement of a communication link from the wireless terminal, but does not “collect a reception ability value *from each mobile station* belonging to a specific multicast group,” as required by amended independent Claim 1. More specifically, the measurement of the communication link in Trossen is not “a reception ability value”, but instead corresponds to a measurement of the link quality between the base station and a wireless terminal.

Further, the quality measurement described above in Trossen is a parameter that is variable depending on propagation conditions between the base station and the wireless terminal. Therefore, Trossen fails to teach or suggest “collecting a reception ability value *from each mobile station* belonging to a specific multicast group, wherein *the reception ability value defines a reception buffer size of each mobile station*,” as recited in Claim 1. The reception buffer size of a mobile station is a parameter that is fixed in the mobile station and does not change based on propagation conditions between a base station and a wireless terminal, as is the case with the channel measurement in Trossen.

Further, as noted above, the Office Action concedes that Trossen fails to teach that “the reception ability value defines at least one of a demodulation method, a reception buffer size, a number of bits or codes which a processor can process per one operation, an error correction method and an interleaving length.”

In an attempt to remedy this deficiency, the Office Action relies on paragraphs [0015], [0032]-[0033], [0047] and [0049] of Petrus, asserting that the reference “teaches a reception ability value that defines a demodulation method.” However, as noted Claim 1 is amended to require that the reception ability value collected from each mobile station *defines a reception buffer size of each mobile station*. Petrus fails to disclose this claimed feature.

Therefore, Trossen and Petrus, neither alone, nor in combination, teach or suggest “collecting a reception ability value *from each mobile station* belonging to a specific multicast group, wherein *the reception ability value defines a reception buffer size of each mobile station*,” as recited in amended independent Claim 1.

Further, Trossen and Petrus, neither alone, nor in combination, teach or suggest “determining ... the transmission method ... so that a mobile station equipped with *a lowest reception ability* (i.e., lowest reception buffer size) can receive the information using the

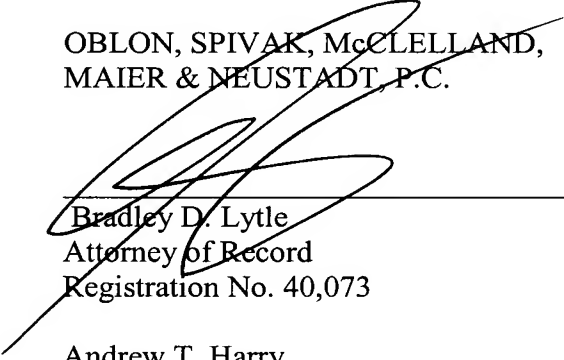
determined transmission method,” which is also a feature required by amended independent Claim 1.

Accordingly, Applicants respectfully request the rejection of Claims 1 and 4 (and the claims that depend therefrom) under 35 U.S.C. § 103(a) be withdrawn.

Consequently, in view of the present amendment and in light of the foregoing comments, it is respectfully submitted that the invention defined by Claims 1, 4, 6-7, 11 and 13 patentably defines over the applied references. The present application is therefore believed to be in condition for formal allowance and an early and favorable reconsideration of the application is therefore requested.

Respectfully submitted,

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